

# WEEKLY REPORT

严凡

May 26, 2019

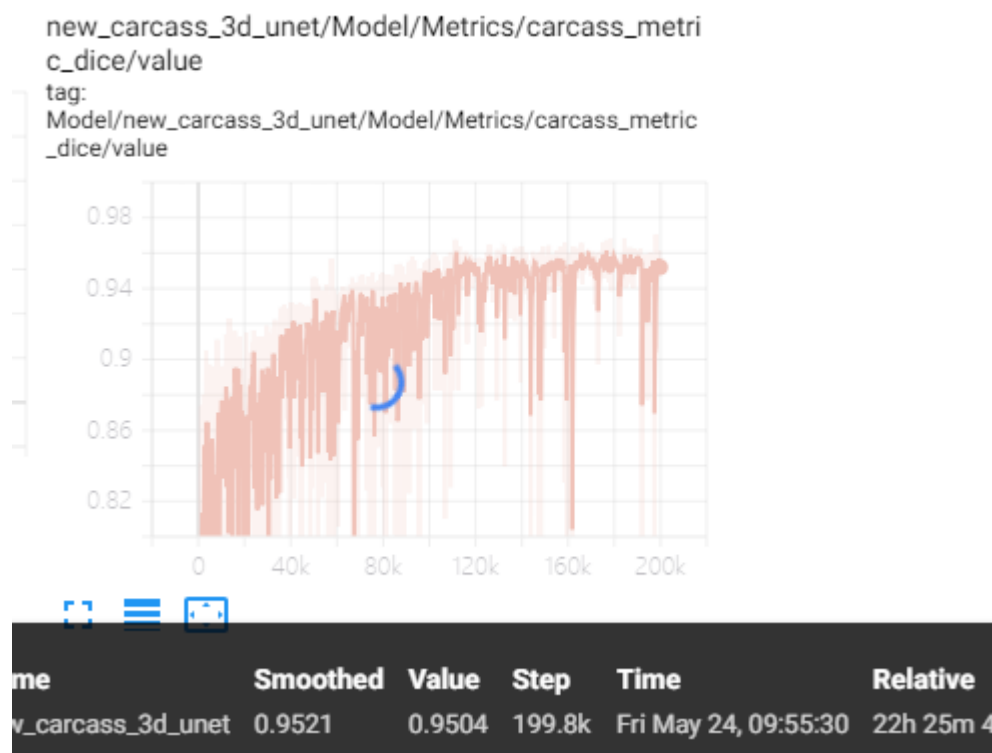
## 1. 本周工作

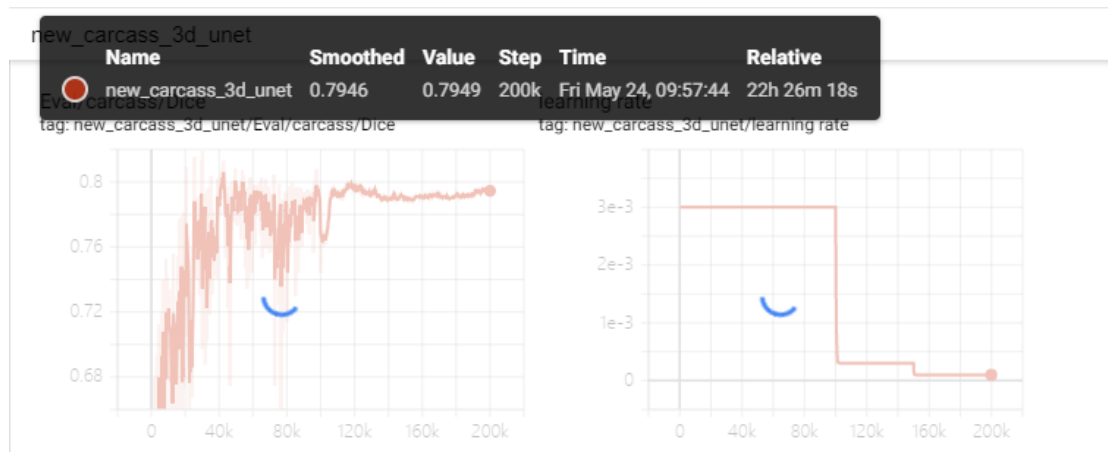
### 1.1 写毕业设计论文初稿

还差三章内容完善

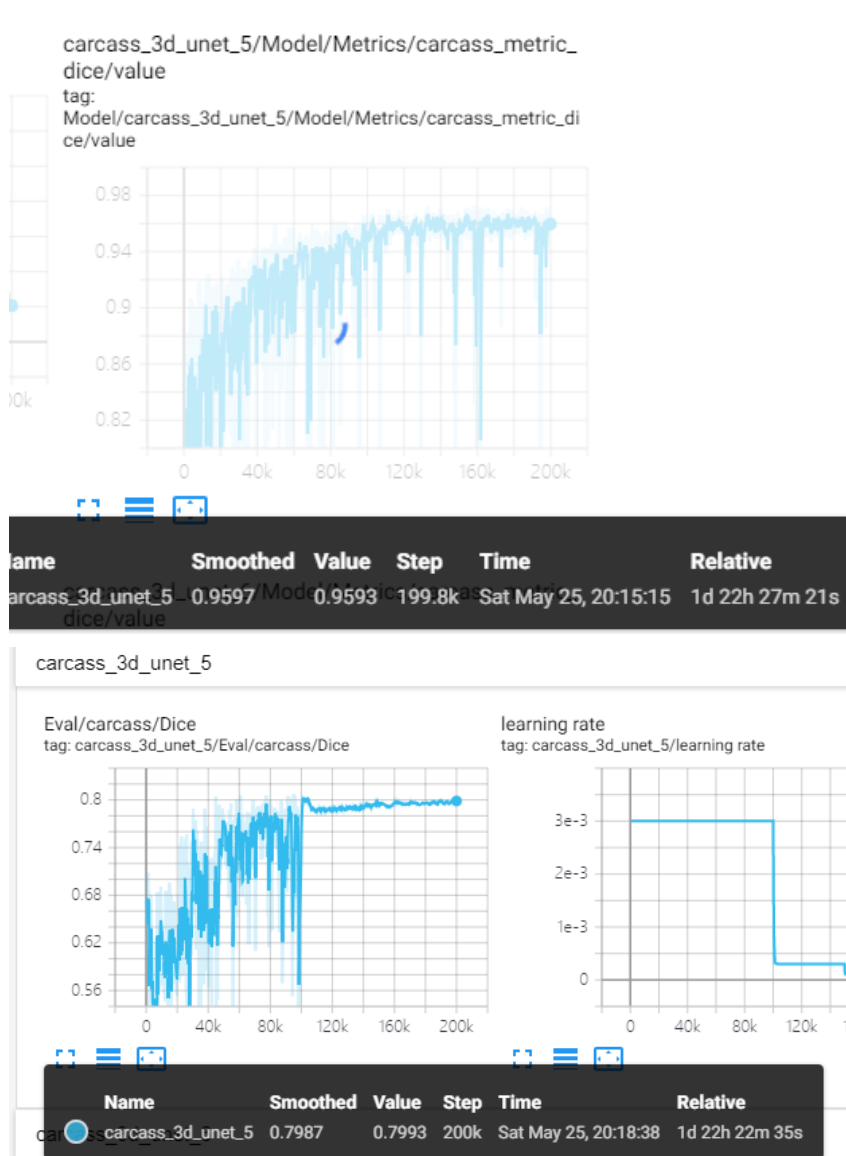
### 1.2 做了一系列胼胝体的对比实验

UNet 4 层

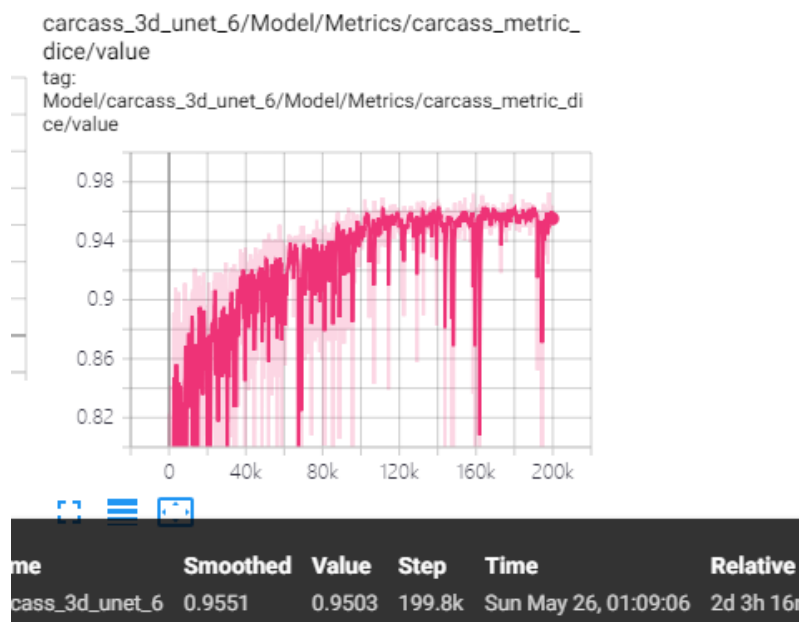




## UNet 5 层



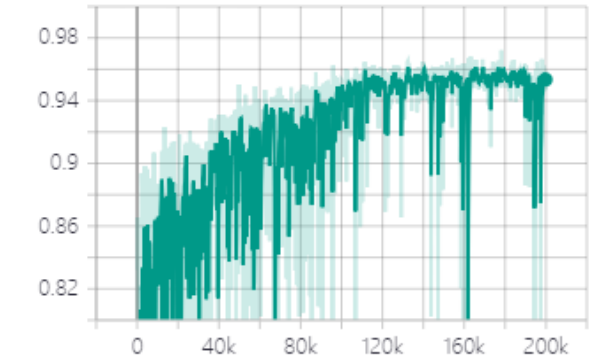
## UNet 6 层



加入图像通道 进行对比

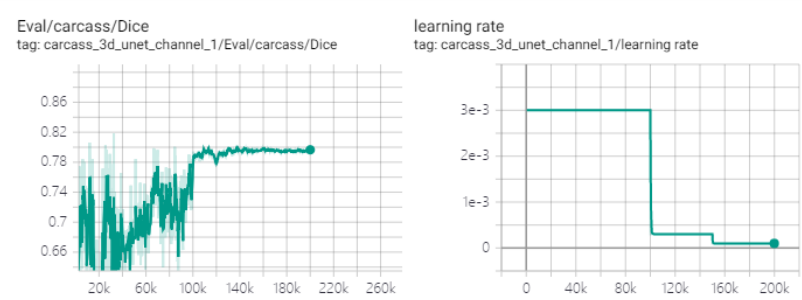
单通道

carcass\_3d\_unet\_channel\_1/Model/Metrics/carcass  
\_metric\_dice/value  
tag:  
Model/carcass\_3d\_unet\_channel\_1/Model/Metrics/carcass\_  
metric\_dice/value



|                           | Smoothed | Value  | Step   | Time                 |
|---------------------------|----------|--------|--------|----------------------|
| carcass_3d_unet_channel_1 | 0.9534   | 0.9539 | 199.8k | Sun May 26, 01:10:55 |

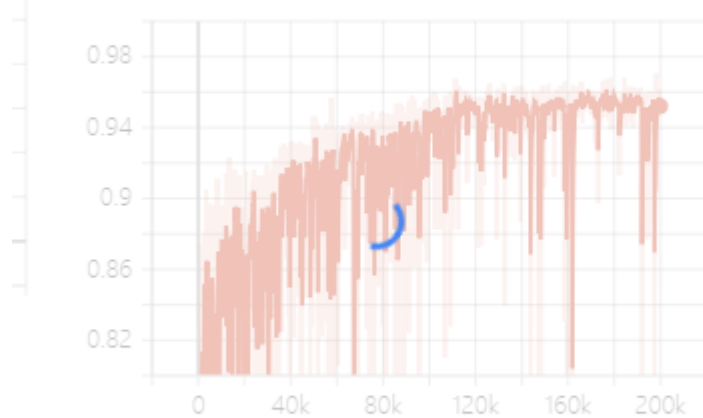
carcass\_3d\_unet\_channel\_1



|                           | Name                      | Smoothed | Value  | Step | Time                 | Relative      |
|---------------------------|---------------------------|----------|--------|------|----------------------|---------------|
| carcass_3d_unet_channel_1 | carcass_3d_unet_channel_1 | 0.7966   | 0.7963 | 200k | Sun May 26, 01:13:04 | 1d 7h 49m 51s |

三通道

new\_carcass\_3d\_unet/Model/Metrics/carcass\_metric\_dice/value  
tag: Model/new\_carcass\_3d\_unet/Model/Metrics/carcass\_metric\_dice/value

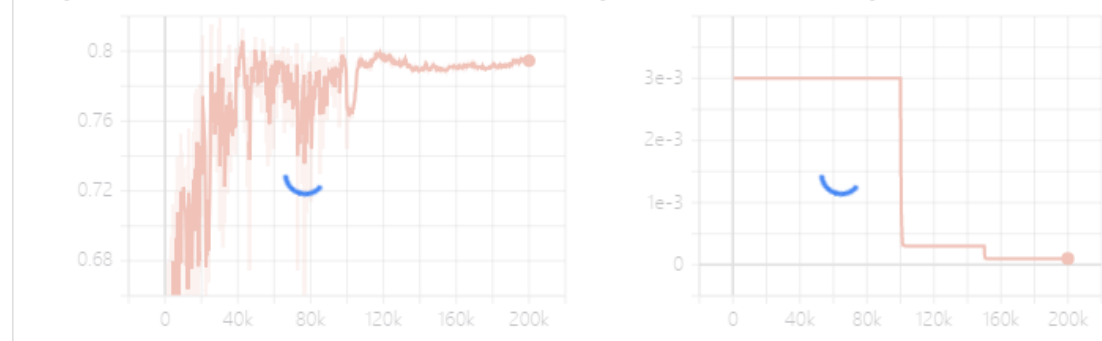


| me                | Smoothed | Value  | Step   | Time                 | Relative  |
|-------------------|----------|--------|--------|----------------------|-----------|
| v_carcass_3d_unet | 0.9521   | 0.9504 | 199.8k | Fri May 24, 09:55:30 | 22h 25m 4 |

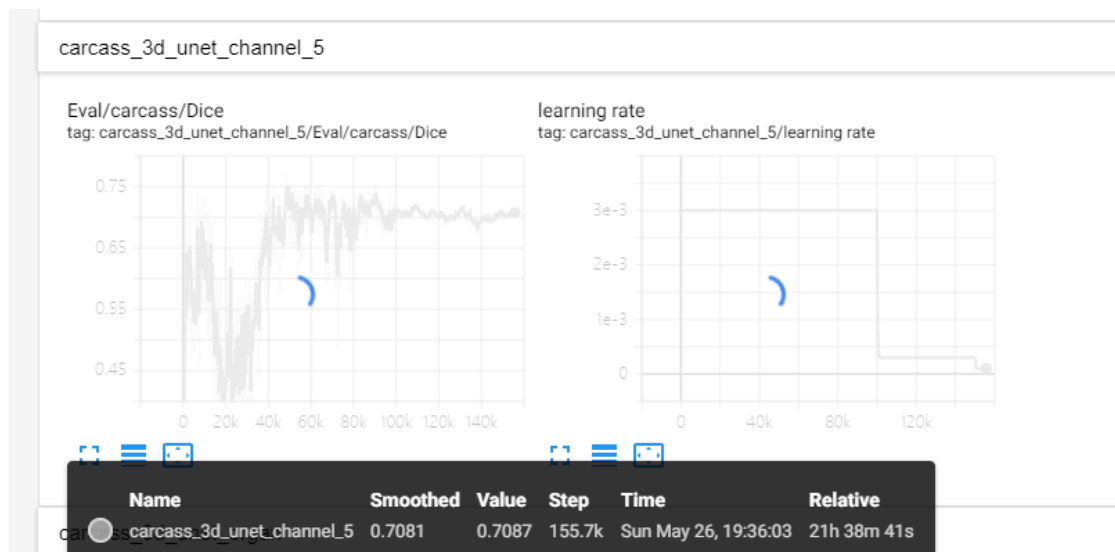
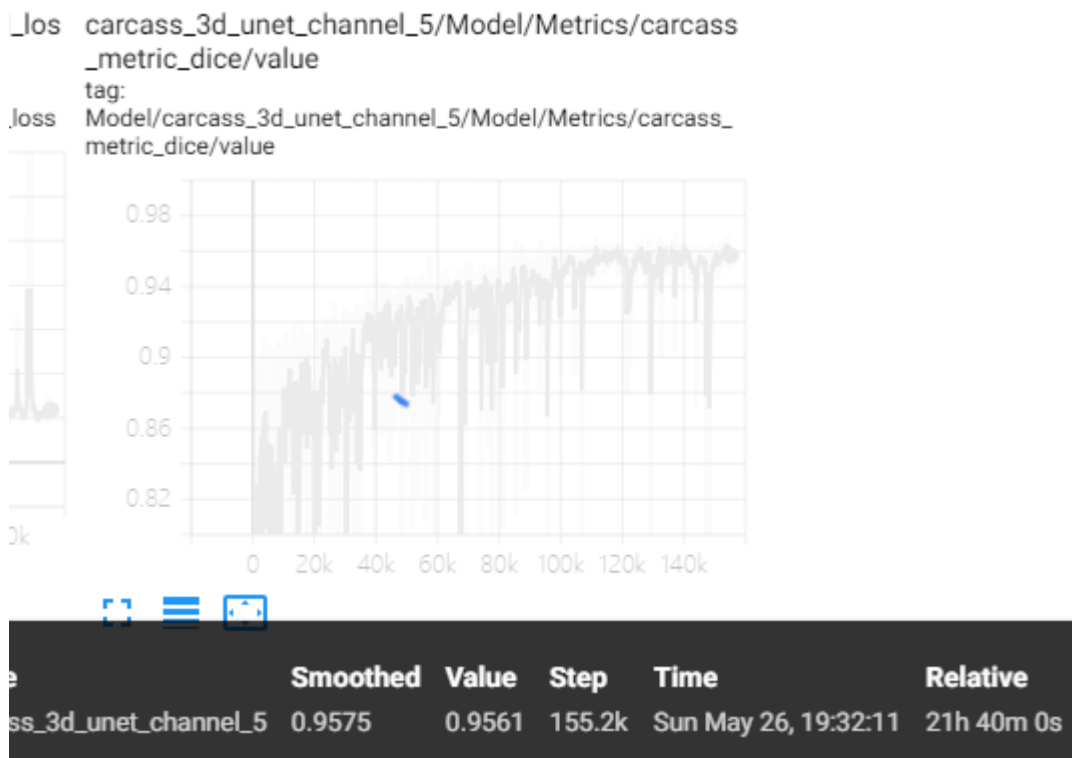
| Name                | Smoothed | Value  | Step | Time                 | Relative    |
|---------------------|----------|--------|------|----------------------|-------------|
| new_carcass_3d_unet | 0.7946   | 0.7949 | 200k | Fri May 24, 09:57:44 | 22h 26m 18s |

Eval: carcass/Dice tag: new\_carcass\_3d\_unet/Eval/carcass/Dice

learning rate tag: new\_carcass\_3d\_unet/learning rate



五通道



经过我的对比发现，对于胛体数据，5 层的 Unet 效果比 4 层和 6 层都好，(不管是 2D 评估还是 3D 评估，这次的 2D 评估由于去除了负样本，所以值是精确的)，并且对于这种 3D 数据来说，单通道测试结果在 3D 评估上居然好于三通道。(不过我认为可能是由于我训练模式的原因导致的。我的训练模式是把所有切片打乱了去进行训练。所以可能通道的效果没能体现出来。所以我对训练默认进行了修改。用 3D 数据做统一的数

据增广和预处理，然后再切片成 2D 数据连续的训练，不对同一组切片打乱。目前还在训练中)

## 2. 下周计划

写完毕业论文初稿。并且尝试一些别的网络的对比实验

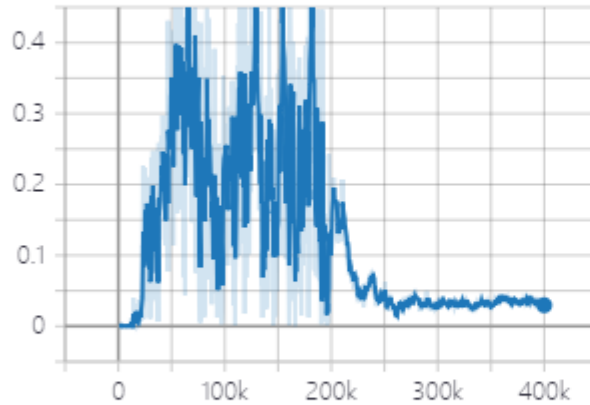
工作时长 $(8+5+0+6+8+4+8)=39$  小时

这个礼拜三一天都在忙着拍毕业照和开会中

carcass\_3d\_unet

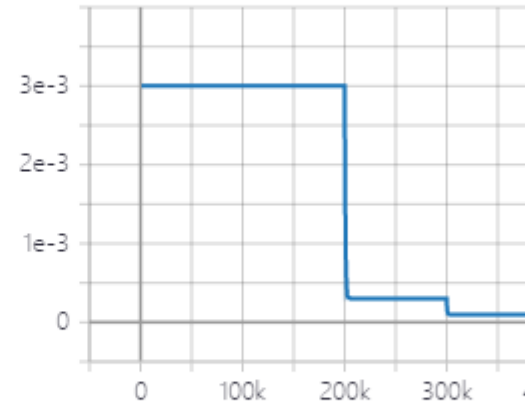
Eval/carcass/Dice

tag: carcass\_3d\_unet/Eval/carcass/Dice



learning rate

tag: carcass\_3d\_unet/learning rate



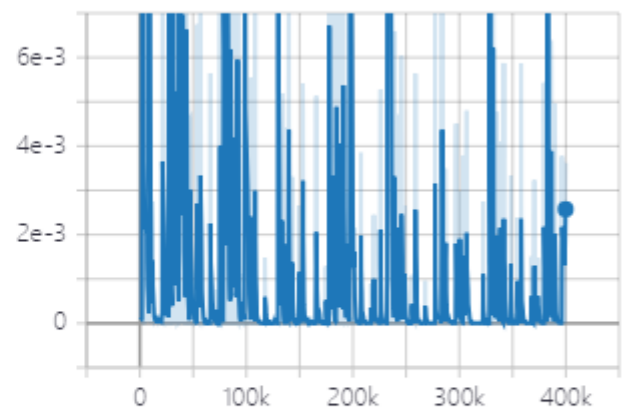
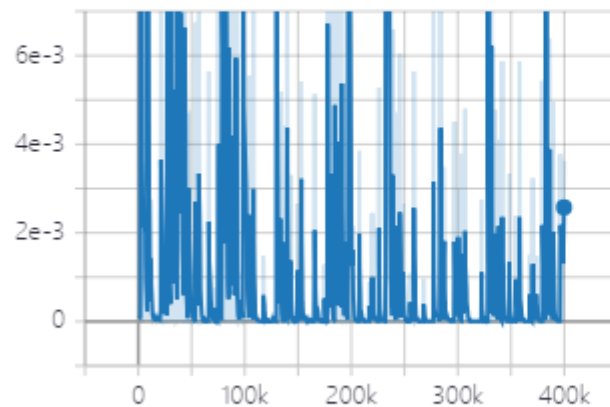
| Name                | Smoothed | Value   | Step | Time                 | Relative       |
|---------------------|----------|---------|------|----------------------|----------------|
| new_carcass_3d_unet | 0.02973  | 0.02953 | 400k | Wed May 22, 20:52:20 | 2d 19h 29m 20s |

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carcass\_3d\_unet/Model/Losses/WeightedSoftmaxCrossEntropy/sparse\_softmax\_cross\_entropy\_loss/value

carcass\_3d\_unet/Model/Losses/total\_loss  
tag: Model/carcass\_3d\_unet/Model/Losses/total\_loss

carcass\_3d\_unet/Model/Losses/WeightedSoftmaxCrossEntropy/sparse\_softmax\_cross\_entropy\_loss/value



carcass\_3d\_unet/Model/Losses/WeightedSoftmaxCrossEntropy/sparse\_softmax\_cross\_entropy\_loss/value

new\_carcass\_3d\_unet/Model/Losses/total\_loss  
tag: Model/new\_carcass\_3d\_unet/Model/Losses/total\_loss